

NEAR FIELD OPTICAL STORAGE MASK LAYER,
DISK, AND FABRICATION METHOD

ABSTRACT

[0035] A mask layer for a high-density near-field optical storage system includes nonlinear optical material and nanoparticles embedded in the nonlinear optical material. The mask layer in combination with a data layer is useful for forming an optical disk. One technique for storing data in the optical disk includes using a gate beam to modify an index of refraction in a modified portion of the nonlinear optical material using a signal beam to provide nanoparticle resonance excitation of selected nanoparticles within the modified portion of the nonlinear optical material.